

## **WHAT IS CLAIMED IS:**

1. A method for treating a subject for a disease selected from the group consisting of heart disease, gallstone disease, colorectal cancer, a precursor of colorectal cancer, gastroesophageal reflux diseases, esophageal cancer, COX-2 mediated inflammatory conditions and cholestatic liver disease, the method comprising:  
orally administering a molecularly imprinted polymer to the subject.
2. The method of claim 1, wherein the subject is treated for at least two of the above diseases concurrently.
3. The method of claim 1, wherein said molecularly imprinted polymer is capable of binding to the toxin and sequestering the toxin.
4. The method of claim 3, wherein said molecularly imprinted polymer comprises at least one functional monomer selected from the group consisting of: 2-, 3- and 4-vinyl-2-hydroxypyridine and N,N'-diethyl(4-vinylphenyl)amidine.
5. The method of claim 4, wherein said molecularly imprinted polymer further comprises a cross-linking agent for cross-linking said at least one functional monomer, wherein said crosslinking agent is selected from the group consisting of ethyleneglycol dimethacrylate, N,N'-diacryloyl- or N,N'-dimethacryloyl ethylenediamine, N,N'-diacryloyl- or N,N'-dimethacryloyl 1,3-diaminobenzene, N,N'-diacryloyl- or N,N'-dimethacryloyl 1,4-diaminobenzene, a diacrylate or dimethacrylate of 1,2-, 1,3-, or 1,4-dihydroxybenzene,

N,N'-(4-vinylbenzoyl)-1,ω-diaminoalkane, and an N,N'-diacryloyl- or N,N'-dimethacryloyl 1,ω-diaminoalkane.

6. The method of claim 3, wherein the toxin comprises at least one bile acid or salt, or a combination thereof.

7. A method for treating a subject for a heart disease, the method comprising: administering a molecularly imprinted polymer (MIP) compound to the subject.

8. The method of claim 7, wherein the heart disease is characterized by a condition selected from the group consisting of high cholesterol and oxidized LDL, or a combination thereof.

9. The method of claim 8, wherein said molecularly imprinted polymer is capable of binding to the toxin and sequestering the toxin.

10. The method of claim 9, wherein said molecularly imprinted polymer comprises at least one functional monomer selected from the group consisting of: 2-, 3- and 4-vinyl-2-hydroxypyridine and N,N'-diethyl(4-vinylphenyl)amidine.

11. The method of claim 10, wherein said molecularly imprinted polymer further comprises a cross-linking agent for cross-linking said at least one functional monomer, wherein said crosslinking agent is selected from the group consisting of ethyleneglycol dimethacrylate, N,N'-diacryloyl- or N,N'-dimethacryloyl

ethylenediamine, N,N'-diacryloyl- or N,N'-dimethacryloyl 1,3-diaminobenzene, N,N'-diacryloyl- or N,N'-dimethacryloyl 1,4-diaminobenzene, a diacrylate or dimethacrylate of 1,2-, 1,3-, or 1,4-dihydroxybenzene, N,N'-(4-vinylbenzoyl)-1, $\omega$ -diaminoalkane, and an N,N'-diacryloyl- or N,N'-dimethacryloyl 1, $\omega$ -diaminoalkane.

12. The method of claim 9, wherein the toxin comprises at least one bile acid or salt, or a combination thereof.

13. A method for treating a subject for a disease of the gastrointestinal tract, the method comprising the step of administering a molecularly imprinted polymer (MIP) compound to the subject.

14. The method of claim 13, wherein the disease of the gastrointestinal tract is selected from the group consisting of colorectal cancer, a precursor to colorectal cancer, gastroesophageal disease, esophageal cancer, cholestatic liver disease and gallstone disease.

15. A method for treating a subject for a disease characterized by a COX-2 mediated inflammatory condition, the method comprising the step of administering a molecularly imprinted polymer (MIP) compound to the subject.

16. A method for performing combination therapy for treating a subject for a disease, the method comprising the step of administering a combination of a molecularly imprinted polymer (MIP) compound and at least one additional drug to the subject.

17. The method of claim 16, wherein the disease is selected from the group consisting of heart disease, colorectal cancer, gastrointestinal reflux disease liver disease and a disease characterized by a Cox-2 mediated inflammation.

18. The method of claim 16, wherein said at least one additional drug alters at least one of the level or composition of the bile in at least a portion of the body.

19. The method of claim 18, wherein said at least one additional drug is selected from the group consisting of a non-specific toxic bile acid or salt sequestrant, ursodeoxycholic acid and bile acid or salt transport inhibitors.

20. The method of claim 16, wherein said molecularly imprinted polymer is capable of binding to the toxin and sequestering the toxin.

21. The method of claim 20, wherein said molecularly imprinted polymer comprises at least one functional monomer selected from the group consisting of: 2-, 3- and 4-vinyl-2-hydroxypyridine and N,N'-diethyl(4-vinylphenyl)amidine.

22. The method of claim 21, wherein said molecularly imprinted polymer further comprises a cross-linking agent for cross-linking said at least one functional monomer, wherein said crosslinking agent is selected from the group consisting of

ethyleneglycol dimethacrylate, N,N'-diacryloyl- or N,N'-dimethacryloyl ethylenediamine, N,N'-diacryloyl- or N,N'-dimethacryloyl 1,3-diaminobenzene, N,N'-diacryloyl- or N,N'-dimethacryloyl 1,4-diaminobenzene, a diacrylate or dimethacrylate of 1,2-, 1,3-, or 1,4-dihydroxybenzene, N,N'-(4-vinylbenzoyl)-1,ω-diaminoalkane, and an N,N'-diacryloyl- or N,N'-dimethacryloyl 1,ω-diaminoalkane.

23. The method of claim 22, wherein the toxin comprises at least one bile acid or salt, or a combination thereof.